





## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6: C07D 401/06, A61K 31/47, C07D 401/12, 401/14, 405/14

(11) International Publication Number: **A1** 

WO 99/37635

(43) International Publication Date:

29 July 1999, (29.07.99)

(21) International Application Number:

PCT/EP99/00333

(22) International Filing Date:

21 January 1999 (21.01.99)

(30) Priority Data:

9801630.6 9821072.7 26 January 1998 (26.01.98) GB

29 September 1998 (29.09.98) GB

(71) Applicant (for all designated States except US): SMITHKLINE BEECHAM PLC [GB/GB]; New Horizons Court, Brentford, Middlesex TW8 9EP (GB).

(72) Inventors: and

(75) Inventors/Applicants (for US only): COATES, William, John [GB/GB]; Smithkline Beecham Pharmaceuticals, New Frontiers Science Park South, Third Avenue, Harlow, Essex CM19 5AW (GB). GWYAN, Michael, Norman [GB/US]; SmithKline Beecham Pharmaceuticals, 1250 South Collegeville Road, Collegeville, PA 19426-0989 (USE HAT-TON, Ian, Keith [GB/GB]; SmithKline Beecham Pharmaceuticals, New Frontiers Science Park South, Third Avenue, Harlow, Essex CM19 5AW (GB). MASTERS, Philip, John [GB/GB]; SmithKline Beecham Pharmaceuticals, SB House, Great West Road, Brentford, Middlesex TW8 9BD (GB) PEARSON, Neil, David [GB/GB]; SmithKline Beecham Pharmaceuticals, New Frontiers Sci-

ence Park South, Third Avenue, Harlow, Essex CM19 5AW (GB) RAHMAN, Shahzad, Sharooq [GB/GB]; SmithKline Beecham Pharmaceuticals, New Frontiers Science Park South, Third Avenue, Harlow, Essex CM19 5AW (GB), 7 SLOCOMBE, Brian [GB/GB]; SmithKline Beecham Pharmacenticals, New Frontiers Science Park South, Third Avenue, Harlow, Essex CM19 5AW (GB) WARBACK, Julie, Dorothy [GB/GB]; SmithKline Beecham Pharmaceuticals, New Frontiers Science Park South, Third Avenue, Harlow, Essex CM19 5AW (GB).

- (74) Agent: VALENTINE, Jill, Barbara; SmithKline Beecham, Corporate Intellectual Property, Two New Horizons Court, Brentford, Middlesex TW8 9EP (GB).
- (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

## Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: QUINOLINE DERIVATIVES AS ANTIBACTERIALS

$$\begin{array}{c|c} A-B-(CH_2) & & & \\ & & & \\ & & & \\ (R^1)_m & & & \\ & & & \\ \end{array} \begin{array}{c} A-B-(CH_2)_m & & \\ & & & \\ & & & \\ \end{array} \begin{array}{c} 3+2 \\ R^2 \end{array} \begin{array}{c} N & -R^4 \end{array}$$

(57) Abstract

A method of treatment of bacterial infections in mammals, particularly in man, which method comprises the administration to a mammal in need of such treatment of an effective amount of a quinoline of formula (I) or a pharmaceutically acceptable derivative thereof wherein: n is 0, 1 or 2; A is NR<sup>11</sup>, O, S(O)<sub>x</sub> or CR<sup>6</sup>R<sup>7</sup> and B is NR<sup>11</sup>, O, S(O)<sub>x</sub> or CR<sup>8</sup>R<sup>9</sup> where x is 0, 1 or 2 novel quinolines for use in the method.